Fall 2018 Syllabus

Course Code: BI-499

I. Instructor Information

Dr. Frederique Kandel
Assistant Professor
Office: Henry 123B
Office hours: M:11:00-Noon & 2:30pm-5:30pm;
W:11-Noon; and by appointment.
frederique.kandel@chaminade.edu

II. Course Information

W 5:30PM - 6:20PM
Eiben Hall, Room 202

III. Text: There is no text for this course
Material will be supplied as needed using canvas posts or hard copies.

IV. Course Title: BI-499-01-1 Microbiology laboratory.

V. Course Description:

Directed Senior Research is a culmination of undergraduate study in biology. The steps that you follow here are quite similar to steps taken by biologists in a wide variety of research labs, from generating ideas and research proposals to collection and analysis of data and finally to the presentation of results to other scientists (including those at granting agencies) through a written publication and or a public presentation. The weekly meetings with the facilitator, Dr Kandel, will be used to review project progress and to perform exercises that aim to increase your knowledge of topical issues in the realms of biological discovery, scientific ethics and recent technical advances.

You should be registered in BI495 if this is your first research semester at Chaminade
You should be registered in BI499 if this is your second research semester at Chaminade

The course has three components:

— 1. Hands-on Laboratory Research Project

You may complete this on or off-campus. Off-campus research internships are typically during the summer prior to your registration in 495 or 499. Students who complete this component off campus are still required to perform #2 and #3 below. If you wish to perform on campus research you must be accepted by a research mentor from the list above by the end of week 2 of the semester. You should aim to spend at least 10 hours per week on your research project. Be aware that this is a minimum and the nature of biological research means that it is sometimes time-consuming and unpredictable.

— 2: Weekly class meetings and assignments, including a final research poster.
— 3: Poster presentation to faculty and staff in week 13 of the semester.

VI. Learning Outcomes.

Departmental learning outcomes:

1. An understanding of the scientific method and the ability to design and test a hypothesis;
2. The ability to visualize, statistically evaluate, validate and interpret scientific data, and to communicate science effectively both orally and in writing;
3. The ability to acquire and comprehend information from published scientific literature and to employ computational resources in the resolution of biological problems;
4. An understanding of the chemical and physical principles that unite all life forms, and of biological organization at the molecular, cellular, tissue, organ, organism and system levels;
5. The ability to define the components and processes of genetic and epigenetic information transmission, and their determinant effects on the adaptive and evolutionary processes that they drive;
6. An understanding of the etiology of major human disease burdens in terms of pathophysiological mechanisms, epidemiology within populations and possible therapeutic approaches
7. An understanding of the entry requirements, career pathways and progression for the major post-graduate fields of research, education and the health professions.

BI 430 class learning outcomes:

Upon Completion of this course, students will be able to:		Program outcome link.
1	Generate and present scientific ideas and Hypotheses	1, 3, 7 and depending on the project 4, 5, 6.
2	Devise and conduct experiments to test their hypotheses	1, 2, 3, 7 and depending on the project 4, 5, 6.
3	Gather and interpret data relevant to their experiment	1, 2, 3, 7, and depending on the project: 4, 5, 6.
4	Discuss the context of their research project	1, 2, 3, 7, and depending on the project: 4, 5, 6.
5	Communicate their findings during a scientific poster session.	1, 2, 3, 7, and depending on the project: 4, 5, 6.

VII. Course Elements/schedule (instructor may modify the schedule as needed).

- **Week 1** **Orientation and Overview**

- **Weeks 2 to 8** **Research and preparation**
  - *By **Week 3:** The name of the Research Project Supervisor and a tentative project title (or theme) is due.*
  - *By **Week 5**: Submit a Literature review relevant to your research project.*

- **Weeks 9 to 12** **Poster preparation.** Poster session rehearsal on week 12! Email a poster copy to frederique.kandel@chaminade.edu

- **Week 13 Poster Symposium**

VIII. Grading Scale

A	Excellent	≥90%
B	Good	≥80% <90%
C	Average	≥70% <80%
D	Below Average	≥60% <70%
F	Failure	<60%

IX. Assignments and Grading

Attendance and participation in weekly meetings	100 points	25%
Final Poster Presentation	200 points	50%
Other assignments (literature review, paper)	100 points	25%

XI. Additional Departmental and University Polices

1. Electronic Devices

Use of music devices and cell phones is prohibited during all Natural Science and Mathematics classes at Chaminade, unless specifically permitted by your instructor. Use of cellphones and music devices in laboratories is a safety issue. In addition, use of cellphones and music devices in any class is discourteous and may lead to suspicion of academic misconduct. Students who cannot comply with this rule will be asked to leave class and may be subject to laboratory safety violation fines. You will be asked to leave class and marked absent if you do not comply. This will negatively affect your grade. Please refer any questions to the Dean of Natural Sciences and Mathematics.

2. ADAA Statement

2.1 Pursuant to several federal and state laws, including the Americans with Disabilities Act of 1990, as amended by the ADA Amendments Act of 2008, and Section 504 of the Rehabilitation Act of 1973, all qualified students with disabilities are protected from discrimination on basis of disability and are eligible for reasonable accommodations or modifications in the academic environment to enable them to enjoy equal access to academic programs, services, or activities. If a student would like to determine if they meet the criteria for accommodations, they should contact the Counseling Center at 808-735-4845 for further information.

3. Attendance

3.1 Students are expected to attend regularly all courses for which they are registered. Students should notify their instructors when illness or other extenuating circumstances prevents them from attending class and make arrangements to complete missed assignments. Notification may be done by emailing the instructor's Chaminade email address or by leaving a message with the instructor's division office (Natural Science and Mathematics 1 (808) 440-4204). It is the instructor's prerogative to modify deadlines of course requirements accordingly. Any student who stops attending a course without officially **withdrawing** may receive a failing grade.

3.2 Unexcused absences equivalent to more than a week of classes may lead to a grade reduction for the course. Any unexcused absence of two consecutive weeks or more may result in being **withdrawn** from the course by the instructor, although the instructor is not required to **withdraw** students in that scenario. Repeated absences put students at risk of failing grades.

4. Policy on Make-Up examinations.
Late submission of some assignments can be accorded by the instructor only under special circumstances. However, the participation to the NSM poster session is mandatory.

5. Policy on Communication
5.1 The University provides a Chaminade email address for all students. Official Chaminade communications will be sent to the students' Chaminade email address and instructors will use only this email to communicate with students. It is the responsibility of the student to check their email frequently. Report email-related problems to the Helpdesk at 808-735-4855 or helpdesk@chaminade.edu.

6. Laboratory Safety Information
The following guidelines are established to provide instructions in maintaining safety for students, staff, and faculty while using any of the science laboratories at Chaminade University. The Division of Natural Sciences and Mathematics (NSM), along with the University Environmental Safety Office are responsible for enforcing the regulations set forth in the current Student Handbook. Queries should be addressed to: Dean of Natural Sciences and Mathematics (808) 440-4204; Environmental Safety Officer (808) 739-4811

7. Title IX Declaration
Chaminade University of Honolulu recognizes the inherent dignity of all individuals and promotes respect for all people. Sexual misconduct, physical and/or psychological abuse will NOT be tolerated at CUH. If you have been the victim of sexual misconduct, physical and/or psychological abuse, we encourage you to report this matter promptly. As a faculty member, I am interested in promoting a safe and healthy environment, and should I learn of any sexual misconduct, physical and/or psychological abuse, I must report the matter to the Title IX Coordinator. Should you want to speak to a confidential source you may contact the following:
• Chaminade Counseling Center| 808 735-4845.
• Any priest serving as a sacramental confessor or any ordained religious leader serving in the sacred confidence role.

8. Academic Honesty

Students are expected to have read and to abide by the “Student Rules of Conduct” which are available in your copy of Chaminade University’s Student Handbook. Cheating in the form of plagiarism, collusion, deception and will not be tolerated and will negatively affect your grade.

9. The instructor may modify elements of this syllabus according to the operational needs of the class.